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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,164	09/10/2001	Takaaki Higashida	2001_1290A	9228

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WASHINGTON, DC 20006-1021

EXAMINER

LORENZO, JERRY A

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/936,164	HIGASHIDA ET AL.	
	Examiner	Art Unit	
	Jerry A Lorengo	1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-40 is/are pending in the application.
- 4a) Of the above claim(s) 23-35 and 38-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36 and 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/10/01&10/29/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

(1)

Drawings

Figures 8 and 9 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

(2)

Claim Objections

Claim 37 is objected to because of the following informalities: Claim 37 discloses, “. . . with a pressure of 24.5×10^4 Pa or larger, . . .” The scientific notation for the pressure should have the 4th power of 10 in superscript form, i.e., “ 24.5×10^4 Pa.” Appropriate correction is required.

(3)

Election/Restrictions

Applicant's election of Group II, claims 36 and 37 in the paper filed April 22, 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

(4)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

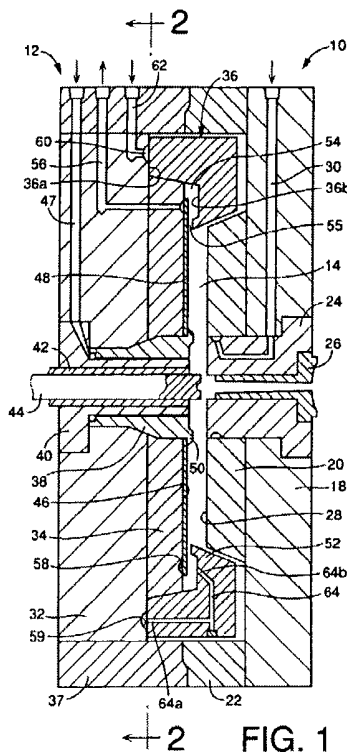
Claims 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,882,700 to Asai in view of JP 02-147221 to Takada in further view of U.S. Patent Nos. 5,810,941 to Moynagh; 5,376,317 to Maus et al.; or 4,783,041 to Sakaida et al.

Regarding applicant claims 36 and 37, Asai disclose an optical disc ejecting method in an optical disc molding process comprising the steps of:

(1) Opening the molds 10,12 so as to initiate the separation of the stamper 48 and the molded disc substrate from a mold clamp (closed) state;

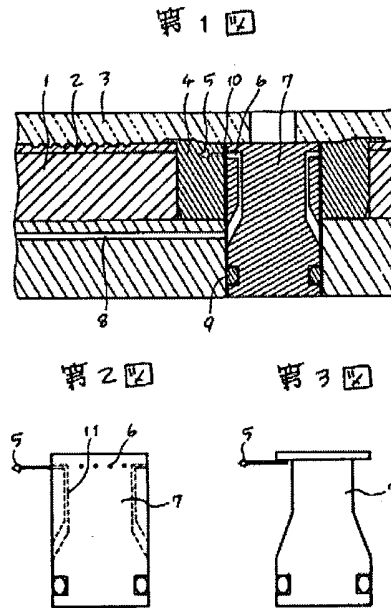
(2) Supplying air (gas) in the space between the non-data carrying (non-form face) surface of the molded disc substrate and the outer mold surface 28 of mold half 10 via air passage 30 such that the molded disc substrate is effectively removed from the mold half 10 while it is held on the surface of the stamper 48; and

(3) Creating a gap between the stamper 48 held on the surface of the mold half 12 and the molded disc substrate via ejector sleeve 42 and injecting pressurized air supplied via air passage 47 between the stamper 48 and the molded disc substrate to remove the disc substrate from the mold half 12. The method of Asai is more clearly illustrated by the figure shown below:



Although Asai discloses the overall method for removal of the molded disc substrate from the inject mold, he does not specifically disclose, as per applicant claim 36, the move distance to which the molds 10,12 move upon opening. Although Asai discloses the injecting of pressurized air supplied via air passage 47 between the stamper 48 and the molded disc substrate to remove the disc substrate from the mold half 12, he does not specifically disclose the pressure of the air as set forth in applicant claim 37.

Takada, however, also drawn to optical disc ejecting methods in an optical disc molding process, disclose that after molding, the mold halves are moved apart and an ejector sleeve 7 is advanced and protruded from the mold half 1 which supports the stamper 2 by a distance of 0.1 to 0.3 mm whereupon the molded disc 3 is moved up followed by the injection of air from an air injection port 6 to the gap between the stamper 2 and the molded disc 3 thereby removing the molded sic 3 from the stamper 2 and mold half 1 (abstract; Figures 1-3). The method of Takada is more clearly illustrated by the figures shown below:



Given the teachings of Takada, it would have been obvious to one of ordinary skill in the art at the time of invention to provide the step of opening the mold halves 10,12 of Asai with the move distance set forth in applicant claim 36, motivated by the fact that the skilled artisan would have appreciated that in order to enable the ejector sleeve 42 of Asai to protrude from 0.1 to 0.3 mm from the stamper surface level of the mold half 12 (as suggested by Takada), there must exist at least 0.1 to 0.3 mm of clearance between the mold halves 10,12 upon mold opening from the clamped state. The obviousness of a move distance of 0.3mm or less is further supported by the fact that it is well known in the art that stampers for use in the injection molding of disc substrates (as taught by U.S. Patent Nos. 5,810,941 to Moynagh; 5,376,317 to Maus et al.; or 4,783,041 to Sakaida et al. – all drawn to the formation of optical discs through injection molding)¹ typically have a thickness of about 0.3 mm.

¹ See, e.g., U.S. Patent No. 5,810,941 to Moynagh (“Stampers are usually about 300 microns thick (0.3mm).” – column 1, lines 31-33); U.S. Patent No. 5,376,317 to Maus et al. (who teach that nickel electroform stampers typically utilized in optical disc molds are typically 0.012” (0.3 mm) thick – column 7, lines 33-39) ; and U.S. Patent No. 4,783,041 to Sakaida et al. (who teach the use of a stamper having a thickness of about 0.3 mm in an injection molding apparatus – column 1, lines 34-38).

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Regarding applicant claim 37, Takada disclose that the pressure of the air injected in the gap provided by the projection of the elector sleeve 7 is between about 5 and 10 kg/cm² (49×10^4 to 98×10^4 Pa). See page 133, column 1, 4th full paragraph.

(5)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry A Lorengo whose telephone number is (571) 272-1233. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

J.A. Lorengo, Primary Examiner

AU 1734

July 2, 2004